

The Financial Value of Energy Efficiency: Diverse Perspectives



50 years

investing on behalf of clients with an exclusive focus on real estate

\$39 billion

managed across three complementary business units

38 partners

from across the Heitman platform own 50% of the company¹ and control all strategic and day-to-day operational decisions



\$34B
PRIVATE EQUITY



\$800M
PRIVATE DEBT



\$4.1B
PUBLIC EQUITY



- CHICAGO
- LOS ANGELES
- LONDON
- FRANKFURT
- LUXEMBOURG
- MUNICH
- WARSAW
- HONG KONG
- MELBOURNE
- SEOUL
- TOKYO

AUM as of June 30, 2017

1. The remaining 50% is owned by a US subsidiary of Old Mutual, a publicly traded, London-based global financial services firm.

Desirable property and spaces

- Opportunity to innovate and differentiate property
- Updated building systems, lighting and amenities

Higher efficiency equals lower operating expenses

- Less energy, water, waste, and maintenance expense improving NOI

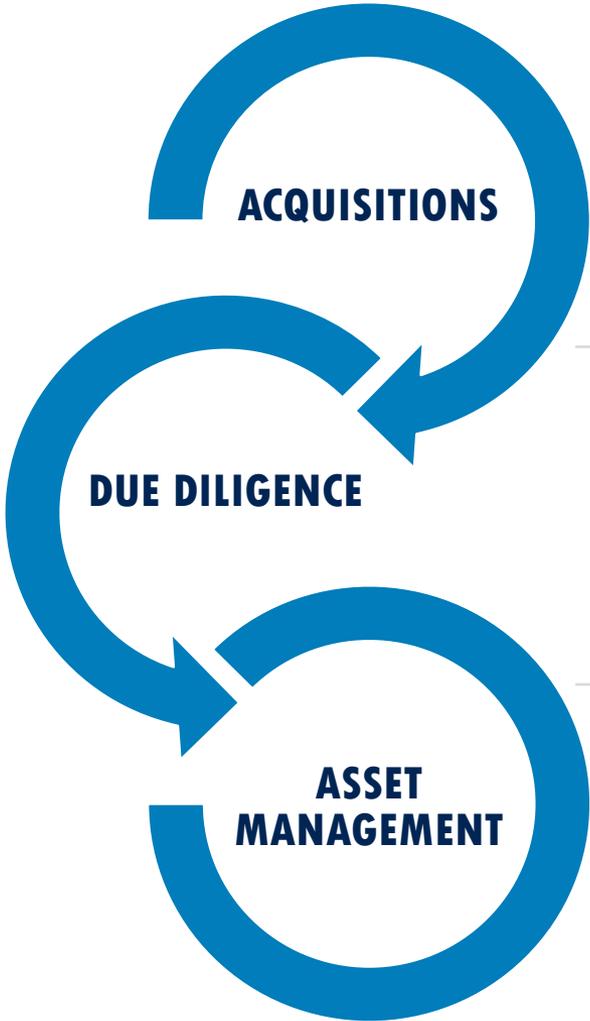
Increased occupancy and rental revenue

- Attraction and retention of occupants leading to shorter lease up time / downtime and improved rental revenue

Improved investment returns

- Enhanced NOI from lower expenses and higher rental income
- Lower investment risk during down cycle valuation





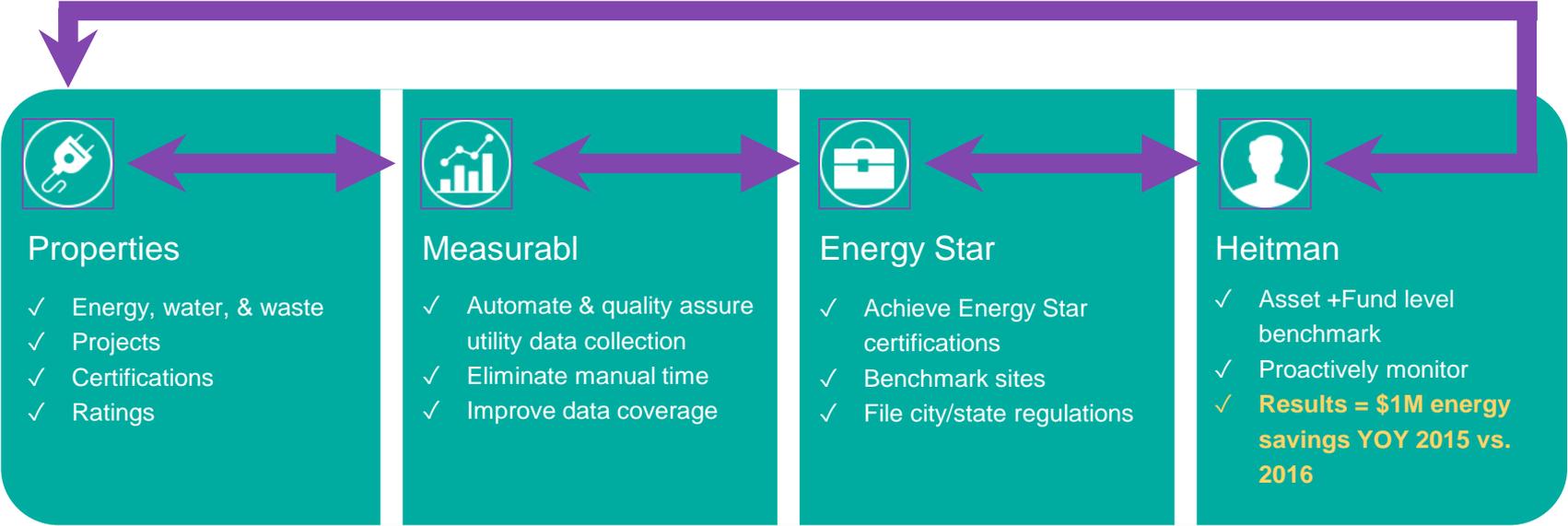
Identify utility expenses, completed energy upgrades and operational control

Physical property assessment and energy audit with proposed energy project costs and savings

Property plan developed with energy project upgrades and utility tracking begins

Measuring what matters

- Heitman, a member of ULI Greenprint Center, utilizes software for portfolio-wide data collection, management, and reporting.



Implemented LED lighting replacement program

- LED bulbs and fixtures have a much longer useful life, require less maintenance and lower energy expense compared to standard lighting fixtures

\$215,000 for standard lighting/fixtures	versus	\$385,000 for LED retrofit
	minus	\$90,000 annual expense savings from reduced consumption
	equals	\$170,000 incremental cost
	resulting	53% ROI



ENERGY STAR PARTNER MEETING



Company Overview

CBRE Group, Inc. is the world's largest commercial real estate services and investment firm

2016 revenues of \$13.1 billion

75,000 employees in 450 offices worldwide

5 billion square feet of managed properties

2017 Partner of the Year Award 10 consecutive years



ENERGY STAR PARTNER MEETING

What is the Value of Energy Efficiency?

We have an obligation and opportunity due to our size and scale

- 6,000 buildings benchmarked
- 350 Million Square Feet
- 79 Average score
- 16% emissions reduction over last 10 years; eliminating 9.8 million passenger vehicle miles



ENERGY STAR PARTNER MEETING

Why is Energy Efficiency Important?

Financial impact to our clients

- 1% reduction in energy nets \$10.500,000 savings across our portfolio; increased asset value of \$175,000,000

Investor Interest

- Direct link between sustainability performance and financial performance
- GRESB

Occupant Demand

- Buildings consume 70% of the electricity load in the US

ENERGY STAR PARTNER MEETING

Energy Efficiency Programs

- Over 500 employees engaged in providing energy and sustainability services worldwide
- Global policies require all managed buildings benchmark in Energy Star Portfolio Manager
- Over 20,000 attendees of BOMA BEEP Training
- Contribute to academic research – Green Building Adoption Index



Fannie Mae Multifamily Green Financing

ENERGY STAR® Commercial Building Partner Meeting:
The financial value of energy efficiency

Chicago, IL

October 25, 2017





Fannie Mae Multifamily DUS[®] Risk-Sharing and Delegation Model



	Borrower	DUS [®] Lender	Fannie Mae Multifamily	MBS Investors
Origination	<ul style="list-style-type: none"> Applies for loan 	<ul style="list-style-type: none"> Originates the loans 	<ul style="list-style-type: none"> Sets loan documentation and delivery protocol 	
Underwriting & Servicing	<ul style="list-style-type: none"> Borrower and property evaluated as part of underwriting 	<ul style="list-style-type: none"> Underwrites and services the loans in accordance with Fannie Mae standards and requirements 	<ul style="list-style-type: none"> Sets underwriting standards and servicing requirements Performs quality control on underwriting and servicing Creates Mortgage Backed Securities 	<ul style="list-style-type: none"> Rely on standard underwriting Require periodic property performance information
Risk-Sharing (private capital at risk)	<ul style="list-style-type: none"> Contributes 20%+ equity 	<ul style="list-style-type: none"> Shares in 1/3 of the credit losses¹ 	<ul style="list-style-type: none"> Shares in 2/3 of the credit losses¹ 	

Fannie Mae Multifamily has a unique risk-sharing model and alignment of interests.

Note: ¹ Example illustrates pari passu loss sharing

Source: Fannie Mae Multifamily



Fannie Mae Multifamily Green Financing Framework

Fannie Mae Multifamily Green Financing targets a **positive, measurable** impact to each pillar of the **Triple Bottom Line**.

Financial

- Lower credit risk
- Higher cash flows
- Higher property value

Social

- Greater affordability for tenants
- Higher quality, more durable housing
- Healthier housing

Environmental

- Lower use of energy, water, and natural resources
- Greater resiliency to natural disasters



Two Paths to Fannie Mae Green Financing

Already Green?

Green Building Certification

Benefits:

Preferential Green Pricing

To Qualify:

Property has one of the recognized Green Building Certifications in place by Rate Lock

Investing in Retrofits?

Green Rewards Green Preservation Plus

Benefits:

**Preferential Green Pricing
Free Energy and Water Audit
Increased Loan Proceeds**

To Qualify:

Choose to implement Green improvements projected to reduce energy or water consumption by 20%

Go to www.FannieMaeGreenFinancing.com for more details!



Case Study #1: Reducing water costs and accessing additional loan proceeds

Green Rewards Loan	\$22.8M, Acquisition, Fixed Rate
Property	156 units, 1984 construction
Budget / unit	\$301
Improvements	Low-flow faucets Low-flow showerheads Low-flow toilets Drip irrigation ENERGY STAR® washing machines
Additional Loan Proceeds / Underwriting	\$8,253 savings underwritten; 1% additional proceeds

Energy/Water Use Reduction 4% Energy, 20% Water



Case Study #2: Accessing significant savings from new central systems

Loan **\$5.6M, Refinance, Fixed Rate**

Property 60 units, 1966 construction

Budget / unit \$2,300

Improvements Replace heating plant
Replace hot water boiler

**Additional Loan Proceeds /
Underwriting** \$23,550 savings underwritten;
2.7% additional proceeds

Energy/Water Use Reduction 23% Energy, 0% Water

DMPS – PreK-12 Education

- 6M Square Feet Under Roof
- 72 Facilities
- Average Age of DMPS buildings = 65 years
- Nearly 33,000 students
- 74% of our students qualify for free or reduced lunch
- Mission: The Des Moines Public Schools exists so that the students graduate with the knowledge, skills, and abilities to be successful at the next stage of their lives.

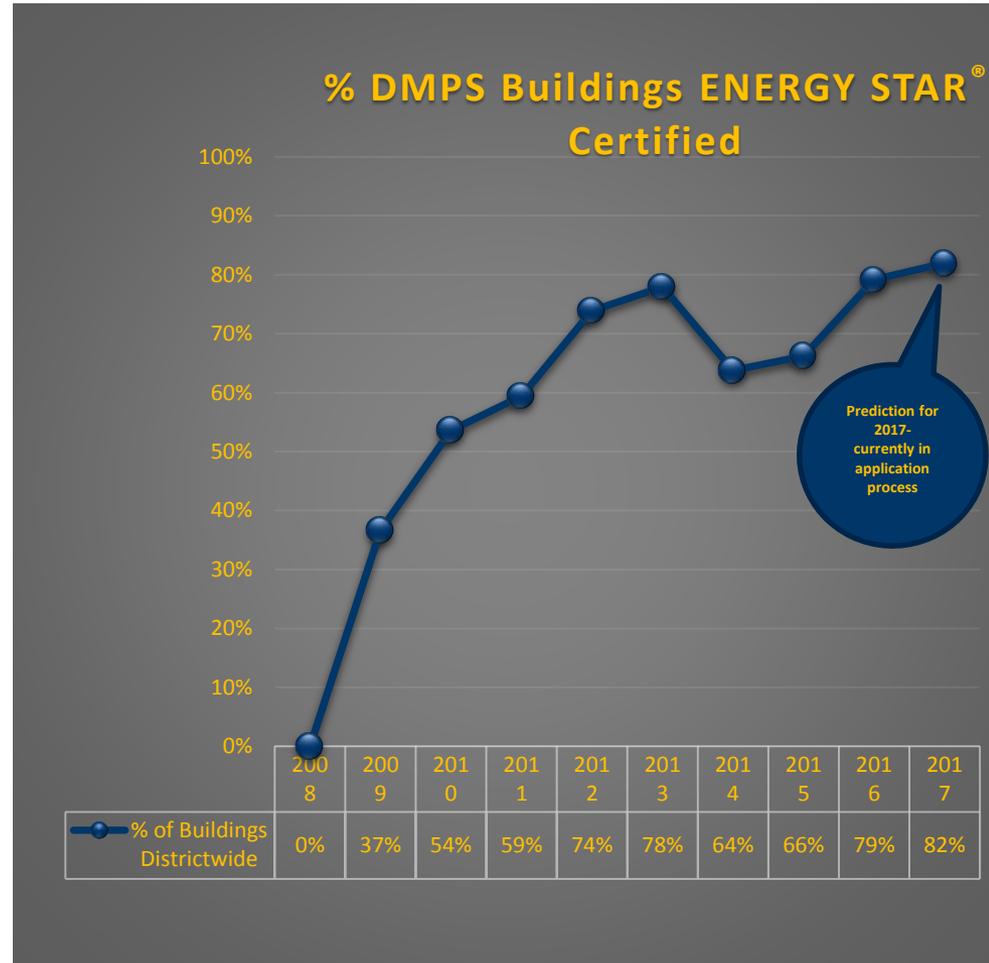
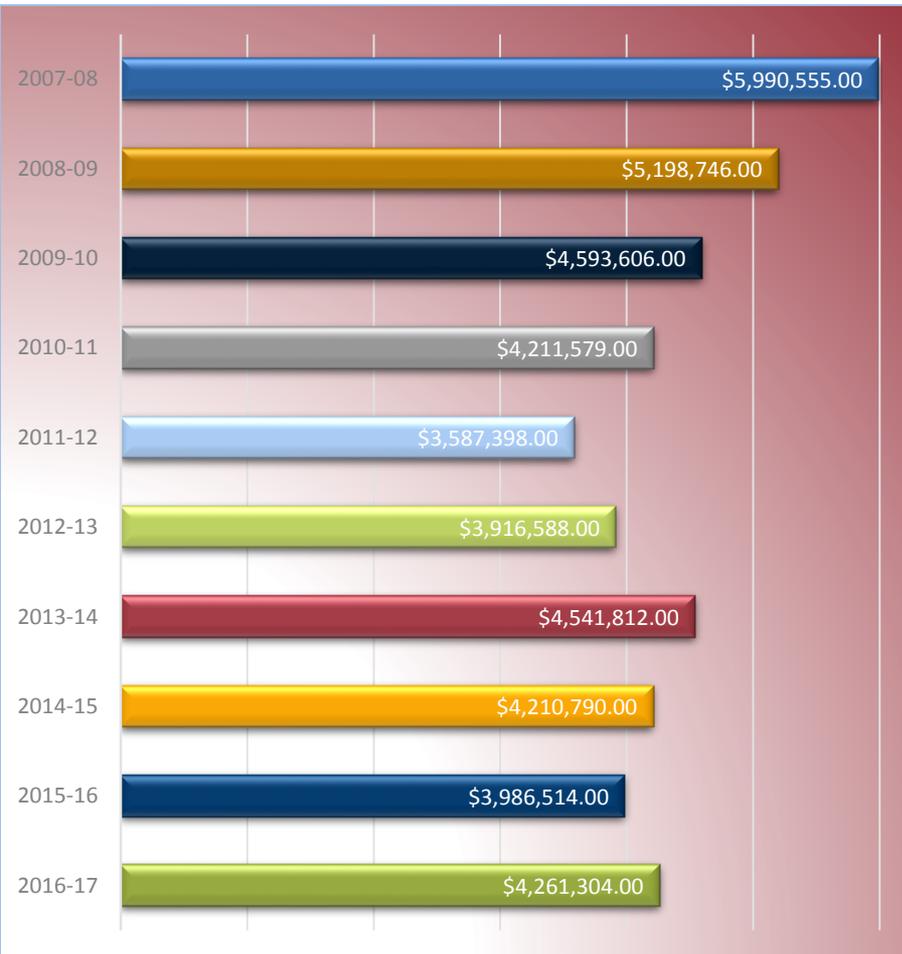


Value of Energy Efficiency - District

A BIG Math Problem

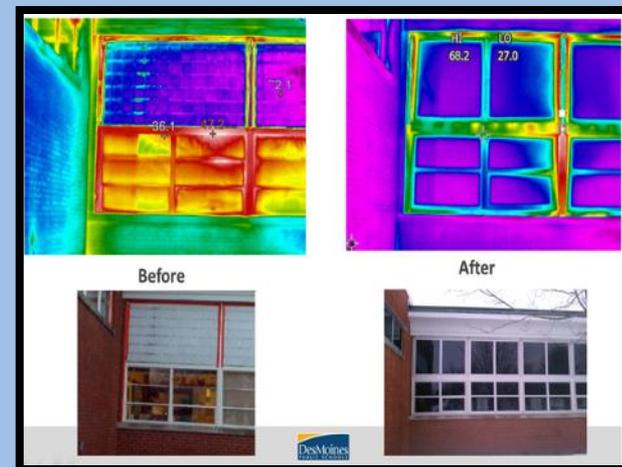
- Currently 83% of our general fund is staff
- New state money is currently 1% (outlook not good)
- Increasing utility rates
- Added square feet
- Ability to improve student environment using less operational dollars
- Saving energy costs was one of our few options we could control
- Maintaining student centered programs

Direct Relationship to ES



Community Value

- Neighborhood enhancement/opportunities
- Keeping our community working. Estimate 60% of dollars spent on projects is labor...supporting families
- Sustainability strategies – 41 geothermal systems in place
- Other improvements include CR climate control, polished concrete standard, controls, mechanical/electrical, eliminating pneumatics, solar hot water heating, LED conversions



Messaging to Taxpayers

Telling the story

- Developing trust.
- Our communities expectation is for us to optimize our resources. They want to hear we are saving dollars.
- Providing (and maintaining) key performance indicators.
- Smart use of public resources. Return on investment. Beating inflation by bonding ahead.
- Communication – Monthly energy report card to staff and community, newsletters, virtual backpack, community presentations.